VIDYA BHAVAN, BALIKA VIDYAPEETH

SHAKTI UTTHAN ASHRAM, LAKHISARAI, PIN:-811311

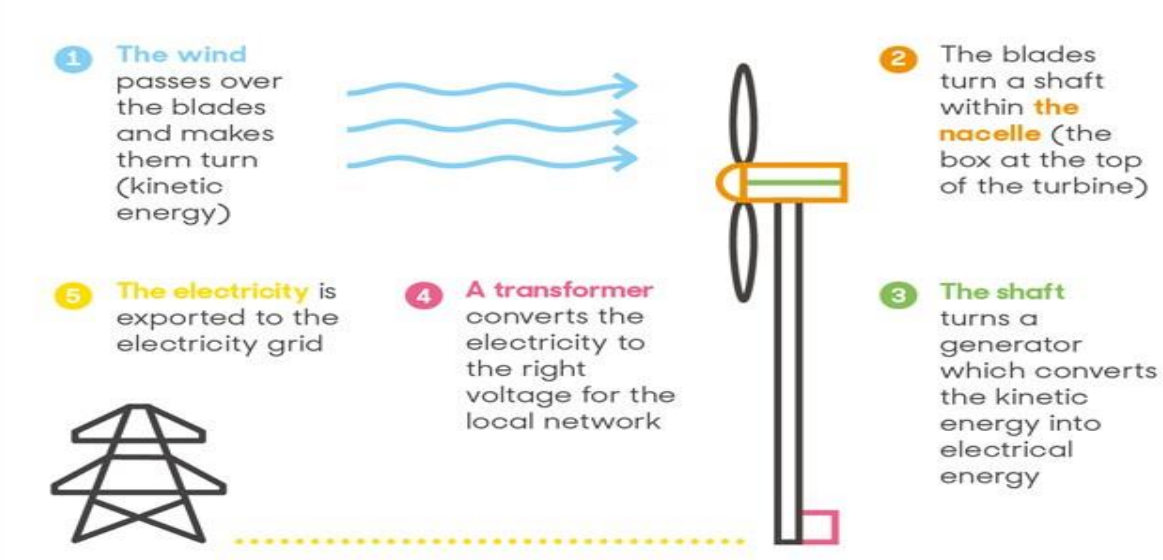
SUBJECT:- PHYSICS **CLASS:- XTH** **DATE:26/05/XX**

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 3. SOURCES OF ENERGY

WIND ENERGY

- Unequal heating of the landmass and water bodies by solar radiation generates air movement & causes winds to blow. This kinetic energy of the wind can be used to do work.
- This energy is utilised to lift water from the well & to generate electricity in the wind mill.
- Actually the rotatory motion of the windmill is used to turn the rotor of the turbine which then generate electricity through Dynamo.
- The output of a single windmill is quite small so a number of windmills are erected over a large area – called wind energy farm
- India Ranked Fifth in the world in harnessing wind energy for the production of electricity. It is estimated that nearly 45,000 MW of electric power can be generated if
- India's wind potential is fully exploited.
- The minimum wind speed for wind mill to serve as a source of energy is 20 KMPH.



Advantages of Wind Energy

1. Eco friendly
2. Efficient source of renewable energy.
3. No recurring expenses for production of electricity

Limitations of Wind Energy

1. Wind energy farms need large area of land
2. Difficulty in getting regular wind speed of 15-20 Km PH.
3. Initial cost of establishing wind energy farm is very high.
4. High level of maintenance of blades of wind mill.

ASSIGNMENTS

1. What is a dynamo? Where it is used in a wind mill?
2. Why wind energy is known as the energy of future?
3. In India which places are best suitable to set up wind farms & why?
4.